1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

phur which they bring from *Olontoſki*, where it drops from the rocks, is quite fine and pellucid; and in the *Pyrites* upon the coaſt it is to be found every where.

The following kinds of earth are common. Great quantities of white chalk are found about the *Kurilſky* lake; tripoly and oker about the Great River, and the villages of *Nachikin* and *Koutchinubiff*; and a purple-coloured earth about the hot ſprings, and ſometimes a hard ſtony oker. Among the ſtones in the mountains are found, but rarely, ſmall cherry-coloured chryſtals; and near the river *Charious* are found pieces of fluſſe, which is like a coarſe green glaſs, of which the inhabitants formerly made knives, axes, lancets, and darts. It is called by the *Ruſſian* natives glaſs, and by the *Kamtſchadales*, *nanagy*. This fluſſe is alſo found in the copper mines about *Ecatherinenbourg*, where it is called a topaz. There is likewiſe here a ſort of light ſtone, white like chalk, of which the inhabitants make plates, and lamps wherein they burn their fiſh oil; and every where upon the ſhore is found an iron-coloured hard ſtone, porous as a ſpunge, and eaſily turned by the fire.

The inhabitants find pellucid ſtones near the ſprings of the river, which they uſe inſtead of flints. Some of theſe ſtones are ſemi-pellucid, whitiſh and milky, and reckoned cornelians by the *Ruſſians*. Some ſmall pellucid ſtones of a yellowiſh colour, like corals, are found upon the banks of ſeveral rivers; and plenty of hyacinths near *Tomſkoy*.

Hitherto they have diſcovered no precious ſtones here. The hills are firmer than thoſe in *Siberia*, and do not fall away like them; but when the earth falls off they find much *lac lunæ*; and a ſoft kind of bolus, of a fattiſh creamy taſte, is found near the *Penſchinſka* ſea, *Kurilſkoy* lake, and the *Olutorſkoy*: this is uſed as an excellent remedy in fluxes. I ſent ſpecimens of moſt of the above things to the Muſeum of the Imperial Academy of *St. Peterſbourg*. I muſt not forget to mention that

CHAPTER VI

ARCHÆOLOGICAL REMAINS FROM THE KAMCHATKA EXCAVATIONS

SOURCE MATERIAL FOR STONE IMPLEMENTS

324 The following is a list of minerals of which the Kamchadal manufactured their stone implements and weapons. The minerals are given in the order of their diminishing hardness:

1 Flint
2 Hornstone schist
3 Quartz schist
4 Quartzite
5 Jasper (variety of quarts)
6 Chalcedony (agate)
7 Andesite
8 Obsidian, andesitic
9 Augite, andesitic
10 Porphyrite
11 Sandstone
12 Quarts slate
13 Marble
14 Slate
15 Red ocher
16 Volcanic tuff
17 White clay

171 While on the Aleutian Islands[1] no flint implements were found, a considerable
324 number of arrow heads and other implements excavated by the author in Kamchatka were made of flint, according to the determination of a mineralogist, Professor A. G. Titov of the University of Moscow. The Aleut used andesite, instead of flint, most frequently for stone implements; the Kamchadal very seldom used this material, preferring the massive varieties of quarts and, partly, obsidian.

Soapstone, of which the Eskimo manufacture their lamps, is not met in Kamchatka and the Kamchadal use harder minerals for lamps, as will be seen later.

LOCALITIES WHERE EXCAVATIONS WERE MADE

172 The present writer made excavations in the following places:

(1) On the shore of Salt Lake on the isthmus in the Avacha Bay, August 19, 1910.
(2) In the Bogatyrevskaya Bay, above Salt Lake, in the forest, August 20, 1910.
(3) Cup-like holes were excavated not far from Salt Lake in afternoon of the same day.
(4) On the slope of the hill on the northeastern side of the Bogatyrevskaya Bay, August 21, 1910.
(5) In the village Syeroglaska, 10 miles from Petropavlovsk, August 25, 1910.
(6) In the village Savoiko, August 29–30, 1910. Savoiko is located on the left bank of the Avacha River, 16 miles from its mouth. Formerly it was called Stary Ostrog and renamed Savoiko after the Governor of Kamchatka (1850–1855), the senior captain and later admiral, V. S. Savoiko.

For numbers 1 to 6, see map of the Avacha Bay (p. 42).

(7) On the bank of the Nalacheva River, September 19.
(8) On the shores of the Nalacheva Lake, September 20 to 24, 1910.
(9) On the Nalacheva Cape, September 26–30, 1910.
(10) Ancient site on the mouth of Kulki River, emptying itself into the Tighil River, 4.8 miles from its mouth, June 10, 1911.
(11) Ancient site on the mouth of Kavran River, June 27 to July 6, 1911.
(12) On the bank of Osernaya River, 2 miles from Kuril Lake, August 6, 1911.
(13) On the Siwunk Cape in Lake Kuril from August 9 to August 14, 1911.

[1] W. Jochelson, *Archæological Investigations in the Aleutian Islands*, p. 88.

[pp. 38-40 have not been included in the file -- Analyst]

CHAPTER VII

STONE LAMPS

171 I discovered 36 stone lamps in excavations in Kamchatka. Some of them were broken. All the types of ancient Kamchadal stone lamps are shown in 354 Plates 14 and 15 and text-figures 64 to 66. They are not remarkable for great diversity as to size and form. I mentioned Aleut lamps[1] longer than 310 mm., 172 and one lamp 1 meter long. There is in the U. S. National Museum at Washington an unusually large stone lamp (No. 90476) from Kodiak Island which weighs 67½ pounds.[2] An Eskimo stone lamp 43 inches long (i. e., somewhat

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66 65

64. Stone lamp of sandstone.
65. Stone lamp of porphyrite.
66. Stone lamp of andesitic lava, in process of manufacture.
All of Kuril Lake.

longer than a meter), weighing about 50 pounds is in the American Museum of Natural History of New York. Dr. Stefanson saw several larger lamps, but was unable to purchase them from their owners.[3]

354 The Kamchadal stone lamps show the following shapes: circular, elliptical,
172 egg-like and sad-iron in outline. No lamps of rectangular form, like those of the Aleut, and clam-shell shaped or crescentic in outline, like those of the Eskimo of Cumberland Gulf or Point Barrow, were excavated in Kamchatka.

354 Lamp No. 3158 shows the cavity rudely picked out with a hammerstone in
● 324 the process of manufacture. All the other illustrations of lamps show them in a finished shape and polished. The straight rims of some lamps were chiseled out
172 with hard quartz chisels (see No. 2183). Most of the lamps are flat-bottomed, so they stand without support. The lamp was put on a wooden stand in a somewhat

[1] W. Jochelson, *Archæological Investigations in the Aleutian Islands*, p. 74.
[2] Walter Hough, *The Lamp of the Eskimo*, Annual Report, U. S. National Museum for the year 1897, Washington, 1898, pp. 1027–1057.
[3] See Vilhjamur Stefansson, *My Life with the Eskimo*, New York, 1913, p. 249.

[A 102]

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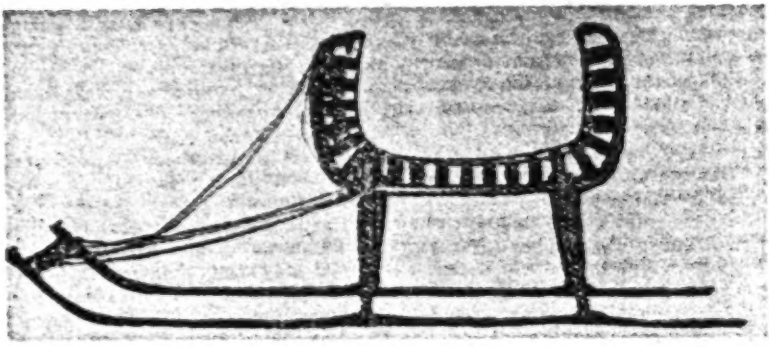
●324

1 (2231). Small lamp of quartz slate. Nalacheva Lake.
2 (2232). Cemented fragments of lamp of diorite. Kuril Lake.
3 (3136). Lamp of quartz slate. From Kuril Lake.
4 (3137). Lamp of quartzite. From Kuril Lake.
5 (3138). Lamp of sandstone. From Kuril Lake.
6 (3139). Lamp of quartz schist. From Kuril Lake.
7 (2921). Lamp of quartz schist. From Kavran site.
8 (3127). Lamp of quartzite. From Kavran.
9 (2920). Lamp of quartz slate. From Kavran.
10 (3140). Lamp of quartz slate. From Kuril Lake.
11 (3144). Lamp of quartzite. From Kuril Lake.
12 (3145). Lamp of quartz schist. From Kuril Lake.

Figures 1, 2 half natural size, figures 3 to 12 two-fifths natural size.

6:Antropova E-4 (no date) 1964 RY3 Kamchadal RY3

493



18th-century dogsled.

105

handle. Later the horn was replaced by an iron tip. Gathering plants was women's work. Fishing and hunting were men's occupations, but the preserving of fish was in the woman's domain, as were the spinning of thread for the nets from nettle, the weaving of mats, and sewing of clothes. Krasheninnikov reports that preparing food, tending the dogs and all carpentry work were done by men.

The Russians found among the Itel'mens a highly developed neolithic technology. "The former Kamchatka metals, almost until the coming of the Russians, were bone and stones. They were used in the making of axes, knives, spears, arrows, lancets and needles," Krasheninnikov writes about the Itel'mens. Rock crystal was also widely used for knives and tips. Fire was made with a wooden drill. Food, mainly fish and meat, was cooked even in the early 18th century in wooden troughs, into which red-hot stones were thrown.

The only domesticated animal of the Itel'mens was the dog. Later, harness dog-breeding of the so-called Eastern Siberian type developed in Kamchatka. However, until the middle of the 19th century, the Itel'mens used their ancient sled with two pairs of arched staves and a saddle-like seat. At the time of Krasheninnikov's visit, the Itel'mens had gliding skis, but used mostly woven snowshoes. River navigation was by bat—narrow boats, hollowed out of whole poplar trunks. For stability and greater carrying capacity, two of these boats were sometimes tied together and covered to make a platform. Krasheninnikov reports that it took the Itel'mens three years to make a bat with a stone adze.

The Russians called the Itel'men villages in the 18th century ostrozhkas, or "little forts." They were situated along river banks and consisted of winter and summer dwellings. The winter dwelling was a semiunderground yurt, as it was then called by the Russians, with an entrance through the smoke-opening in the roof. The dwelling also had a side exit, but this was used only by women and children. The summer dwelling of the individual family was the so-called balagan—a pyramidal, grass-covered tent set on high platforms resting on piles. The ancient dress of the Itel'mens resembled Koryak and Chukchi dress.

Such, in its general features, was the material culture of the Itel'mens in the beginning of the 18th century. Analogous to the low level of material production were the primitive forms of social relations.